What is claimed is:

1. A synchronization detecting apparatus making synchronization detection by using a pilot signal on which a synchronization signal is multiplexed, comprising:

a channel estimating unit making channel estimation by using the pilot signal from which at least the synchronization signal is removed; and

a synchronization signal demodulating unit demodulating the synchronization signal by using a result of the channel estimation, wherein synchronization detection is made by using the demodulated synchronization signal.

2. The synchronization detecting apparatus according to claim 1, wherein said channel estimating unit makes channel estimation by using a pilot signal in a slot other than a slot including the synchronization signal.

3. The synchronization detecting apparatus according to claim 3, wherein said channel estimating unit divides signal bits used for channel estimation into groups, and makes

channel estimation by using signal bits of a group other than a group including the synchronization signal.

4.   The synchronization detecting apparatus according to claim 1, wherein
said channel estimating unit makes channel estimation by using signal bits used for channel estimation, from which a bit of the synchronization signal is removed.

5.   The synchronization detecting apparatus according to claim 1, wherein
said channel estimating unit and a channel estimating unit for demodulating data are put into common use.

6.   The synchronization detecting apparatus according to claim 1, wherein
said channel estimating unit makes weight coefficients, which are applied to a process result of each slot, different from weight coefficients for data modulation, which are used at the time of channel estimation, when making the channel estimation.

7.   The synchronization detecting apparatus

according to claim 1, wherein

weight coefficients, which are applied to each slot at the time of channel estimation, are varied according to reception quality information obtained 5 from a reception quality estimating circuit.

8. The synchronization detecting apparatus according to claim 1, wherein

weight coefficients, which are applied to each 10 slot at the time of channel estimation, are varied according to a fading speed obtained from a fading frequency estimating circuit.

9. The synchronization detecting apparatus 15 according to claim 1, wherein

synchronization detection is made by varying parameters for synchronization detection according to a state of a propagation path.

20 10. The synchronization detecting apparatus according to claim 1, wherein

synchronization detection is made by using an output of a path having a largest correlation value among outputs of a RAKE receiver of a CDMA receiving device.

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11.   A synchronization detecting method making synchronization detection by using a pilot signal on which a synchronization signal is multiplexed, comprising:

5   making channel estimation by using the pilot signal from which at least the synchronization signal is removed; and

demodulating the synchronization signal by using a result of the channel estimation, wherein

10   synchronization detection is made by using the demodulated synchronization signal.